1 Interview Summaries

1.1 Department of Marine Resources

Interview Type	Personal, State Agency
Interview Location	Department of Marine Resources
Interview Date	November 1, 2001
Summary Date	November 13, 2001
Interviewer	CDM / Michelle Thaler (thalerma@cdm.com)
Interviewed:	*Seth Barker, Bureau of Resource Management & Statistics Division (seth.barker@state.me.us) PO Box 8 West Boothbay Harbor, ME 04575 207-633-9507 Laura Livingston, Water Quality Specialist (laura.Livingston@state.me.us) John Fendl, Water Quality Specialist (john.fendl@state.me.us)
Staff Size (approx)	3 staff engaged in GIS activities
Budget (approx)	$50,000-$100,000 for GIS in 2001. Anticipate $40,000 in 2002.
URL:	http://www.state.me.us/dmr/

1.1.1 Overview

The Bureau of Resource Management and Statistics Division collects and monitors scientific data in order to protect and conserve the marine resources of the state of Maine. The bureau monitors water quality for the purpose of shellfish closure as part of the National Shellfish Sanitation Program. The bureau also monitors finfish aquaculture operations, coordinates oil spill response activities, and is involved in the restoration of anadromous fish resources to the rivers of Maine. The Bureau is also responsible for marine education programs including the operation of the public aquarium in West Boothbay Harbor

1.1.2 GIS Initiatives

1.1.2.1 Overview of GIS Utilization

The Bureau uses GIS technology to display sampling data. GIS is also used to locate parcels with septic system failures that may impact the marine environment. GIS is used for code enforcement also.

1.1.2.2 GIS Operating Environment and Infrastructure

DMR maintains the following:

- 25 ArcView 3.2
- 1 ArcView Image analyst, 3-d analyst
- 1 ArcInfo 8.1
- ArcIMS (including a server with an application running)
- ERDAS image software
- Hardware includes:
    - PCs running Windows NT, 2000 and 95

- 2 servers, one is a license manager
- 1 server in Lamoine, ME
- WAN
- 2 HP 750C plotters
- 2 24x36 digitizers
- 11x17 flatbed scanner
- GPS receivers including Trimble ProXR and Magellen units for law enforcement (used by Marine Patrol – they have 50 units)
- 4 Geo-explorers with ArcPad for ground truthing data

1.1.2.3 GIS Data Resources and Requirements

1.1.2.3.1 Spatial Data

- Data is in UTM Zone 19 Meters NAD83
- Parcel data is being obtained from towns – sometimes this data is in a different coordinate system. Parcel GIS layers are being converted to UTM for use with DMR data. This data is not updated on a regular basis. DMR has parcel data for the following towns:
    - Arundel
    - Berwick
    - Bowdoinham
    - Brunswick
    - Cape Elizabeth
    - Cumberland
    - Freeport
    - Gorham
    - Gray
    - Harpswell
    - Kennebunk
    - Kennebunkport
    - North Berwick
    - Portland
    - Scarborough
    - South Berwick
    - Wells
    - Westbrook
    - Yarmouth
    - York

  Additional data is being obtained. DMR staff convert this data to UTM and, in come cases, from CADD files to GIS data formats.

Existing data sets include:
Basemap features:
Statewide 24,000 basemap from OGIS

Analysis layers include:
Orthophotos from Casco Bay and Saco bas flown at 1:12,000 scale
Parcel data from towns for shoreline survey
Bathymetry
Shellfish habitat
Surficial sediments data
DEP data including environmental vulnerability maps
Georeferenced nautical charts
NPDES licensing
10M contours

Currently unavailable but desired data sets include:
Orthophotos for coastal communities flown at low tide
Roads (E911 with address ranges)
Parcels for all coastal towns
Surficial sediments data for fisheries work
Marine equivalent of landcover (i.e. eelgrass, kelp beds, etc.)
Shipping routes
3 mile limit location
12 mile limit location
Fisheries management areas
Fish farm locations
Landuse
Rivers
Watersheds
Sewer line locations
Outfall location
Septic system locations
Inter-tidal data

1.1.2.3.2 Attribute Data

- Database design for sampling project currently underway – data is to be stored in Oracle

1.1.2.3.3 Data Issues

- Data sharing with Canadian Department of Fisheries and Oceans and New Brunswick agencies is sometimes hindered by incompatible data formats.
- There is little metadata currently available.
- Staff need greater GIS instruction.

1.1.2.4 GIS Applications and Application Requirements

DMR would like to use Citrix to put GIS tools on staff desktops. This could be accomplished with an ArcIMS application. Data storage is an issue. With Citrix, data

could be stored on a server in Augusta and different agencies could access the data as needed.

Planned future GIS activity and applications:
The DMR would like to use remote sensing for cross border research.

1.1.3 Major Benefits and Cost Justification

DMR sees the value in pooling resources for GIS software. With ArcGIS technology it is possible to have floating licenses of ArcInfo and ArcView software. Citrix would allow users to hit a server in Augusta for a license. This would save software costs for agency staff that are occasional GIS users.

DMR uses GIS as a tool to help perform analysis and monitoring. As such, DMR staff exchanges data with many state and federal agencies including the US Fish and Wildlife service, College of the Atlantic, Eastern Maine Development Corp, GPCOG, Casco Bay Estuary Project, the Island Institute and many towns along the coast. Data exchange could be facilitated by a statewide GIS initiative that provides server space for data storage.

DMR recognizes the need for data standards and routine maintenance to preserve data integrity. A statewide GIS initiative would help ensure data integrity by setting metadata standards, data quality standards, and ensuring that data is documented.